



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/784,972	02/15/2001	Mary Chan-Park	26822-0006	5444
25213 7590 11/26/2003				
HELLER EHRMAN WHITE & MCAULIFFE LLP				
275 MIDDLEFIELD ROAD				
MENLO PARK, CA 94025-3506				
			EXAMINER	
			CHACKO DAVIS, DABORAH	
			ART UNIT	PAPER NUMBER
			1756	

DATE MAILED: 11/26/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/784,972

Applicant(s)

CHAN-PARK ET AL.

Examiner

Daborah Chacko-Davis

Art Unit

1756

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 September 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 53-92 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 53-92 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 11-13.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims 53-54, 59-66, and 88, are rejected under 35 U.S.C. 102(e) as being anticipated by U. S. Patent No. 6,018,383 (Dunn et al).

Dunn, in the abstract, in col 5, line 42-67, in col 6, lines 1-15, in col 7, lines 12-26, in col 8, lines 48-67, and in col 9, lines 1-9, discloses a process for patterning structures on electronic modules (displays) comprising providing a support web (flexible material substrate) with a layer of photosensitive material on the substrate continuously, providing a mask with a mask pattern, wherein the mask is a continuous strip (loop)

(with patterns of transparent portions and opaque portions) that is selectively illuminated (selectively exposed) to form a corresponding structure (form an exact pattern i.e., inherently the unexposed portions are removed so as to form the pattern of the mask) of the mask pattern onto the substrate in a continuous manner, aligning the mask strip with the flexible substrate (reference 34) such that a portion of the mask is parallel to a portion of the substrate (see figure 1) in the same direction, and rolling the flexible mask in synchronized motion (relatively or with same velocity) with the flexible substrate (see figure 2). Dunn, in col 6, lines 1-20, and lines 56-67, and in col 7, lines 1-11, discloses the mask is rolled such that a portion of the mask and a portion of the substrate are substantially parallel, and rolling in the same velocity (a common drive motor assembly for the mask and the substrate) and in the same direction (see figures 1, and 2) (claims 53-54, 59-66, and 88).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 55-58, and 67-92, are rejected under 35 U.S.C. 103(a) as being unpatentable over U. S. Patent No. 6,018,383 (Dunn et al) in view of U. S. Patent Application Publication No. 2002/0029969 (Yager et al).

Art Unit: 1756

Dunn is discussed in paragraph no. 3.

The difference between the claims and Dunn is that Dunn does not disclose steps (a), (b), (c), (d), and (e) of claim 55, claims 67-87, and claims 89-92,

Yager, in the abstract, in [0013], in [0025], [0026], [0027], in [0029], and in [0039], [0040] and in figures 1B, and 2B, discloses that the support web (movable separation matrix on a solid support) comprises a plurality of conductor lines (wires), and that the radiation sensitive composition is radiation curable material such as positive photoresists are coated over the conductor lines, and the structures are disposed as an array of microcups (reference 2, with microcup walls) with a top opening for a display device. Yager, in [0038], in [0040], [0041], [0042], and [0043] discloses that the mask pattern corresponds to the matrix formed in the substrate and the image of the microcups is projected to the resist coated substrate (resist coated extended series of micro-electrodes) through radiation, one subset of microcups at a time, wherein the positive resist is selectively exposed and cured, and developed, and the uncured portions are removed (stripped) to form the channels in the matrix (reference 2). Yager, in [0047] discloses that the substrate is patterned to form a plurality of arrays of microcups, by patterning each chip at a time (to form first, second, third etc subsets of microcups). Yager, in [0030], [0032], [0033], [0034], [0035], [0047], discloses that the microelectrodes formed are filled with gel matrix (electrophoretic display pigments), and are then closed with a top laminate (protective sheet). Yager, in [0029], in [0038], [0039], and [0040], discloses that the conductor lines (wires) are transparent to visible light.

Art Unit: 1756

Therefore, it would be obvious to a skilled artisan to modify Yager by employing the method of using the moveable extended series of micro-electrodes on the support web of Yager in the photolithographic tool of Dunn because Dunn, in col 4, lines 36-62, in col 7, lines 12-26, in col 8, lines 64-67, in col 9, lines 1-9, discloses that rolling a flexible substrate in synchronous motion with the photomask with simultaneous deposition of the resist on the substrate, followed by exposure results in increased throughput with almost any desired resolution, the provision of exposing a helical substrate in one continuous helical scan, and significantly lowering the cost per exposure of the electronic module (displays devices).

Response to Arguments

5. Applicant's arguments filed on 09/16/2003 have been fully considered but they are not persuasive. The 102 and 103 rejections made in the previous office action (paper no. 10) are maintained.

A) Applicants argue that Dunn et al., fails to teach a continuous and synchronized process for the formation of well-defined structures or microcups or for multi-color displays.

Dunn, in the abstract, in col 1, lines 6-10, and lines 50-54, in col 4, lines 1-8, and lines 41-44, in col 6, lines 10-12, teaches the implementation of a continuous and synchronized process for patterning flexible substrate in the manufacture of display modules.

Art Unit: 1756

B) Applicants argue that Yager teaches parts or parts of the process not suggested by the invention.

Dunn is depended on for the usage of flexible substrates (recited in the claims). Yager is depended upon to disclose the manufacture of microcups and the usage of radiation curable material (although Dunn teaches that the material is photosensitive) for patterning purposes.

C) Applicants argue that Yager does not disclose the use of a continuous and a synchronized process.

Dunn is depended upon for such disclosure (see paragraph no. A).

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

Art Unit: 1756

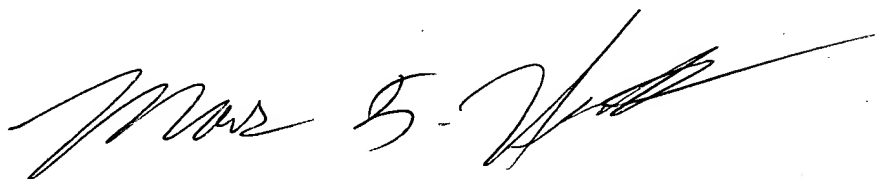
the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daborah Chacko-Davis whose telephone number is (703) 306-5923. If the examiner is unavailable, you may contact her supervisor, Mark F. Huff at (703) 308-2464. FAX communications should be sent to the official Right FAX number (703) 872-9306 for all responses. FAXES received after 4:00 P.M. will not be processed until the following business day.

dcd

no

November 19, 2003.



MARK F. HUFF
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700